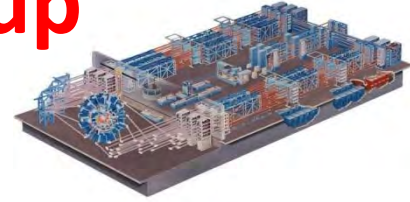


The OMEGA Laser Users Group



2011 Attendees at annual April Workshop



Who comprises OLUG? (..well, a large number of you in the audience...)

269 Scientists — students, academics, researchers — from:

- 33 Universities (107 members)
- 23 Centers and National Laboratories (76 from National Labs)
- Over 14 countries

OLUG Users account, through NLUF and LBS alone, for ~30% of all OMEGA shots: ~60 shot days



OLUG's major events, activities and goals:

- Hold an annual 2.5-day workshop in April
- Hold a mid-year Users meeting/update at APS-DPP
- Advise the OMEGA management on ways to improve and upgrade the facility through OLUG's *Findings and Recommendations (F & R)*. Bob McCrory and the LLE management take to heart our advice, and we work closely with them to implement the F & R .
- Promote & undertake cutting-edge research at OMEGA and complementary research at other HEDLP facilities such as the NIF
- Offer students, postdocs & young researchers opportunities to present their work, get advice, & meet potential employers
- LLE/OLUG are members of NUFO (National Users Facility Organization), which has the goal of advancing science and science education in the US

Activities and Objectives of Annual Workshop:

- ~ 55 to 60 contributed presentations (~ 35 students/Ptdocs
- Student- Postdoc panel discussion: issues of young researchers at OMEGA and elsewhere
- ***Findings and Recommendations*** for OMEGA, which have major impact on the Facility
- Facility overviews and updates on those ***Findings and Recommendations*** either implemented or being implemented
- HEDP community outreach

OLUG thanks NNSA, LLE, OFES, the FSC, and MIT
for supporting its activities.

50 Students, postdocs, & young researchers attended the 2011 OLUG workshop



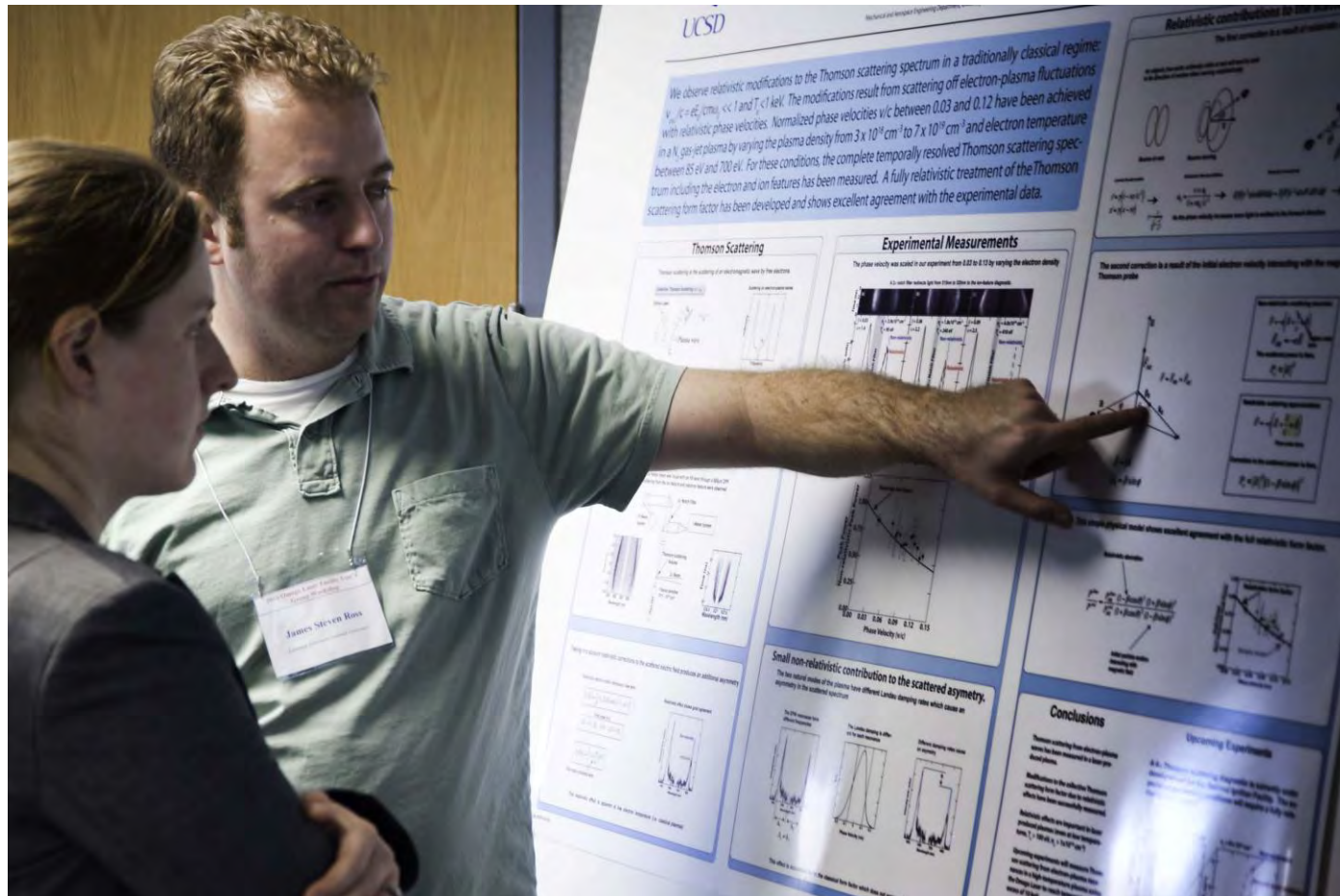
Thanks to the NNSA grant, we expect a similar number of student/postdocs at the upcoming April 2012 Users Workshop

Poster Sessions are a central feature of our annual April workshop.



3 poster sessions, spread over two days, will be held in upcoming 25-27 April 2012 workshop

In the 2011 Workshop, UC student Steven Ross discussed relativistic Thomson scattering experiments conducted on OMEGA



Well over half of all presentations are given by postdocs and students, such as Nareg Sinenian (MIT), shown here in 2011



Diagnostics are an important way for students to get involved with both OMEGA and the NIF. This is something you will certainly hear about at this Workshop.

The 2011 student/postdoc panel, chaired by Tammy Ma, discussed issues of young researchers at OMEGA and presented their own set of *Findings & Recommendations*



Tammy's Panel will again reconvene and reassess young researcher's issues/findings in upcoming April 2012 workshop.

Joeilkenny talked about moving diagnostic and experimental platforms from OMEGA to the NIF — he'll do so again at the 2012 Workshop



A large fraction of NIF diagnostics and platforms are developed and tested at OMEGA. I'm sure Joe will talk about this in his presentation, and it will be evident in the Poster session.

For students and post docs, SNL, LANL, LLE, and LLNL representatives gave overviews of their lab's HED research



Ray Leeper discussed HED research at SNL

Each workshop has a memorable banquet.



“Good friends make for good science.”

The Findings and Recommendations, 3 of the 13 chairs shown here, is the mechanism by which the OLUG Users directly influence the OMEGA Facility.



And influence we do!

The 13 Findings and Recommendations of the 2011 Workshop

- Tammy Ma, Chair, LLNL, *Findings and Recommendations of the Student/Postdoc Panel.*
- Louise Willingale, Chair, Univ of Michigan, *Bringing EP performance up to full specification, and 4- w probe utilization.*
- Mingsheng Wei, Chair, GA, *Long-pulse operations of OMEGA-EP*
- Carolyn Kuranz, Chair, Univ. of Michigan, *Independent operations of the 3 legs of OMEGA 60*
- Dustin Froula, Chair, LLE, *Work to develop a simulation capability for the OMEGA external Users*
- Peter Norreys, Chair, Rutherford Appleton Laboratory, *Dual Focus for the OMEGA 60 Facility.*
- Dennis McNabb (LLNL) and Johan Frenje (MIT), Chairs, *Developing implosion capabilities at OMEGA with arbitrary fuel mixtures of tritium for advancing Plasma Nuclear Science*
- Alex Zylstra, Chair, MIT, *An Ultra-low charged particle spectrometer for studying nucleosynthesis reactions in OMEGA implosions*
- Nareg Sinenian (MIT) and Jim Cobb (LLNL), Chairs, *Utilization of Thomson Parabola on OMEGA for characterizing implosion ion-loss channels and for studying nucleosynthesis reactions in OMEGA implosions*
- Hans Herrmann, Chair, LLNL, *Gamma-ray spectrometry for Plasma Nuclear Science and implosion physics*
- Maria Gatu-Johnson, Chair, MIT, *A Low-Energy Neutron Spectrometer for Plasma nuclear science and implosion physics*
- Gennady Fiskel, Chair, LLE, *Developing magnetic inertial fusion platforms for basic science and implosion physics*
- Hye-sook Park, Chair, LLNL, *Cu-K(alpha) crystal imaging on OMEGA-EP for HED physics*

**See page 8 of the
2011 Workshop
Proceedings**

The Findings and Recommendations **focus on 5 strategic areas**

- **OMEGA 60- beam Facility**
- **OMEGA-EP Facility**
- **Diagnostics for the Facility**
- **Overarching General issues**
 - Example: A small, dedicated on-site team for assisting OMEGA Group Users in experiment design.
- **Accessibility of OMEGA operational information**
 - Example: Circumstances leading to “Penalties” in time available for shots.

Each year Sam Morse, the facility director, addresses LLE's implementation of the *Findings & Recommendations*, important upgrades in the facility, and on-going and projected work.



Sam will do such in our upcoming April 2012 workshop. Immediately after his talk, a poster session will include 10 posters focusing on these facility issues and upgrades.

Critical Ingredient:

The LLE management has been extremely responsive to the OLUG Findings and Recommendations, and to assisting OLUG in their activities, while at the same time allowing for OLUG's independent assessment of the Facility and ways to improve it.

OLUG thanks the LLE management for their responsiveness and this on-going dialog as it is an essential cornerstone to our effectiveness as a User group.

Agenda for the OMEGA Users Workshop: 25-27 April 2012

Wednesday: 25 April 2012

7:00-8:15 Continental Breakfast
8:15-8:30 Introductory Remarks and Welcome
8:30-9:15 Riccardo Betti **Critical steps to Ignition**
9:15-10:00 Aki Takabe **Laboratory astrophysics on collisionless shock and particle acceleration in the Universe**
Coffee Break 10:00-10:15
10:15-11:00 Sean Regan **Xray Thomson Scattering: Incisive probe for warm, dense matter**
11:00-11:45 Joeilkenny **Moving diagnostic platforms from OMEGA to NIF (and back)**
11:45-12:30 Nino Landen **Scientific advances and challenges at the National Ignition Facility**
12:30-1:00 Pictures
1:00-1:30 Lunch
1:30-3:30 **Poster Session 1** (HED Science)
Coffee Break: 3:00 – 5:00
3:30-6:00 **Poster Session 2** (HED Science)

Thursday: 26 April 2012

7:00-8:00 Continental Breakfast
8:00-8:05 Announcements
8:05-8:45 Hans Herrmann **ICF Gamma Spectroscopy: New window to plasma nuclear science**
8:45-9:30 Sam Morse **OMEGA Facility Update: Progress on User Recommendations**
9:30-10:00 Abbas Nikroo **Target Basics for NLUF and Laboratory Basic Science**
10:00-12:30 **Poster Session 3** (Facility and HED Science)
Coffee Break: 10:00 – 12:00
12:30-1:30 Lunch
1:30-3:00 **Student-postdoc panel** Tammy Ma and team members
2:45-3:30 Break
3:00-6:00 **Presentation/Discussion of the 13 Findings and Recommendations of the Users**
Coffee Break: 3:00 – 5:00
7:00-10:30 Banquet at Meliora

Friday: 27 April 2012

7:15-8:00 Continental Breakfast
8:00-8:30 **NNSA –OFES remarks**
8:30-10:45 **Discussion of Findings and Recommendations with the LLE management**
Coffee Break 10:45-12:00
11:00-1:00 **Overview of HED Science at LLNL, LANL, SNL, and LLE**
1:00-2:00 Lunch

**See the 2012
Workshop Agenda
that has been
handed out.**

Come join us!

The importance of an active Users group for HED science was stressed by former Undersecretary Steve Koonin in a keynote address to a Nascent NIF Users “Group” in 1999



“Formal user groups with a commonality of interest, if not purpose, good intragroup communications, honest and open peer review, and good user liaison with the facility management seem to be ‘best practice’, as is a willingness of the facility to serve the users.”